

### ABSTRACT OF THE DISCLOSURE

A physical layer for an inline power device of a network power system. The network power system includes inline power devices such as power source equipment and a plurality of powered devices and further includes a plurality of corresponding transmission media. The plurality of transmission media are connected to the corresponding power source equipment and powered devices through a power interface at each end of the transmission media. The multiple power interfaces of the power source equipment are often referred to as ports. For each port of the power source equipment and the plurality of powered devices, there exists a physical layer. The physical layer includes an inline power control signal source. The inline power control signal designates when to apply power to a port when there is no power applied to the port and when to remove power from the port when there is power applied to the port.